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7590 Rodger W Parkhurst STEPTOE & Johnson LLP 1330 Connecticut Avenue N.W. Washington, DC 20036			EXAMINER BLAU, STEPHEN LUTHER	
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JACQUES FAGOT

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Appeal 2007-2403  
Application 10/072,429  
Technology Center 3700

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Decided: April 25, 2008

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Before WILLIAM F. PATE, III, MURRIEL E. CRAWFORD, and JOSEPH  
A. FISCHETTI, *Administrative Patent Judges*.

PATE, III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals the rejection of claims 1, 7, 8, 11, 12, 15, and 16. Claims 3, 4, 6, 9, 10, and 14 stand withdrawn from consideration. Claims 2, 5, and 13 have been canceled. We have jurisdiction under 35 U.S.C. §§ 134 and 6.

The claimed invention is directed to a golf club head used on the typical iron-type golf club. Each golf club of a set of golf clubs of the so called cavity-type has a peripheral wall bounding the rear face of the golf club head. The upper rear peripheral wall is provided with a series of recesses which vary from one iron within the set to another iron in the set to cause the center of gravity of each of the golf club heads to vary in distance relative to the upper face of the head.

Claim 1, reproduced below, is further illustrative of the claimed subject matter.

1. A set of golf club irons, each iron of said set having a head, said head having a rear face, said rear face having a cavity bounded by a plurality of walls, wherein said plurality of walls comprises at least one lower wall forming a sole and an upper wall, said upper wall having a plurality of faces, said plurality of faces comprising a rear face, an upper face, a lower face facing the cavity and a plurality of lateral faces, wherein said head comprises at least one recess in the upper wall and said at least one recess opens onto the rear face of said upper wall, the recess being elongate in the main direction of the upper wall, and wherein a volume of said at least one recess inside said upper wall varies from one iron to another within said set, to cause the center of gravity of each head to vary in distance relative to said upper face from one iron to another.

The references of record relied upon by the Examiner as evidence of obviousness are:

Fenton	US 5,290,036	Mar. 01, 1994
Daisuke <sup>1</sup>	JP 7-213656	Aug. 15, 1995
Besnard	US 5,643,112	Jul. 01, 1997
Peters	US 6,093,112	Jul. 25, 2000

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<sup>1</sup>Hereinafter referred to as JP 7-213656.

In addition, the Examiner has cited the following patent as evidence of recognition in the art:

Toulon                      US 2002/0119828 A1                      Aug. 29, 2002

Claims 1, 8, 11, 12, and 16 stand rejected under U.S.C. § 103 as unpatentable over Peters in view of Besnard.

Claims 7 and 15 stand rejected under 35 U.S.C. § 103 as unpatentable over Peters in view of Besnard and further in view of JP 7-213656 and Fenton.

#### FINDINGS OF FACT

Peters discloses a correlated set of golf clubs. More specifically Peters is directed to iron-type golf clubs (Peters, col. 1, l. 7). Such golf clubs are provided in correlated sets which include a large range of clubs (Peters, col. 1, ll. 40-41). The set of clubs includes clubs with a low loft angle and a low club number and clubs of a higher loft angle with a higher club number. It is a goal of the Peters' invention to provide a set of golf clubs having a first center of gravity located at a first vertical distance from the ground plane and clubs in the set with higher club numbers that have a second center of gravity located a second vertical distance from the ground plane, in this instance the second vertical distance being longer than the first vertical distance. (Peters, col. 3, ll. 16-33). With reference to Figure 2 of the Peters patent, a first club in the set is shown with a low club number and center of gravity marked CG1. The second club of intermediate club number is shown with center of gravity CG2 which is higher than CG1. Finally, a third club of high club number or wedge designation is shown with the center of gravity CG3 higher still than the center of gravity CG2. Thus Peters is

recognition in the art that the center of gravity of the club head should vary upwardly from one iron to another within the set.

Turning to the disclosure of Besnard, Besnard is also directed to a golf club head for an iron-type golf club. The iron-type club of Besnard is of the rear cavity-type. (Besnard, col. 1, ll. 17-20). Besnard discloses that it is important when using enlarged or oversize heads in the cavity-type iron to adjust the center of gravity of the golf club head by removing mass from the upper portion of the peripheral edge toward the toe (Besnard, col. 2, ll. 27-36). Thus, Besnard is a teaching that the center gravity of a golf club may be adjusted by adding and removing mass, i.e., providing a recess in the upper portion of the peripheral edge or upper wall. It is further noted that some embodiments of Besnard rely on a number of recesses rather than a single elongated recess. See, for example the embodiments of Figures 9 and 10 which show, what is in actuality, three discrete recesses in the upper wall.

The Examiner has cited JP 7-213656 to show that it is known in the art to mount impact absorbing material on the top edge of the back of the iron to promote feel. Fenton has been cited to disclose an impact absorbing material placed in the recess on the back of the iron wherein the material is polyurethane. Fenton states that this is to have softness and elasticity to create a substantial lessening of vibration.

## PRINCIPLES OF LAW

A claimed invention is unpatentable if the differences between it and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a) (2000); *KSR Int’l v. Teleflex Inc.*, 127 S.Ct. 1727, 1729-30 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

In *Graham*, the Court held that that the obviousness analysis is bottomed on several basic factual inquiries: “[ (1) ] the scope and content of the prior art are to be determined; [ (2) ] differences between the prior art and the claims at issue are to be ascertained; and [ (3) ] the level of ordinary skill in the pertinent art resolved.” 383 U.S. at 17. *See also KSR*, 127 S.Ct. at 1734. “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR* at 1739.

“When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or in a different one. If a person of ordinary skill in the art can implement a predictable variation, § 103 likely bars its patentability.” *Id.* at 1740.

“For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.*

“Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* at 1742.

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.

*KSR*, 127 S.Ct. at 1742.

## ANALYSIS

We will affirm the rejections of claims 1, 7, 8, 12, 15, and 16 and reverse the rejection and enter a new ground as to claim 11 on appeal. Claims 7 and 15 have not been separately argued and fall with claim 1 from which they depend.

In our view, Peters clearly discloses the desirability of shifting the center of gravity of an iron golf club from lower to higher as the club number increases. Besnard, on the other hand, discloses that the center of gravity of a club can be shifted by removing material or adding a recess in the top peripheral portion around the back of a cavity iron. The method of moving the center of gravity disclosed in Besnard is merely one choice from a finite number of identified practical solutions which would have a reasonable expectation of success. It therefore renders the subject matter of the claims on appeal obvious to try. *See KSR* at 1742. In our view, Peters

discloses what to do, i.e., move the center of gravity upwardly as the iron number increases. Besnard discloses how to do it, by remove material or providing recesses in the upper peripheral wall that surrounds the cavity on the back of the iron club. This is simply combining prior art elements according to known methods to yield a predictable result. *See KSR* at 1739.

Appellant on pages 6 and 7 of the Brief argues that there are features that Peters does not have. This is merely an individual attack on the reference when the rejection is based on a combination of references. Appellant argues that Peters teaches attaching weighted inserts to the lower perimeter region of the cavity back. While this is true it does not militate for the reversal of the rejection. Appellant appears to overlook the fact that the weighed insert is added to move the center of gravity down, and the clubs of the set that do not have the weighted insert have a higher center of gravity as the club numbers increase. This is the teaching of Peters that is relied upon by the Examiner. On page 8 of the Brief, Appellant argues that Besnard does not vary recess volume among clubs in a set. We agree that Besnard is not concerned with a set. However, Besnard shows how to vary the center of gravity of a cavity-type iron golf club by removing mass or providing recesses in the top peripheral surface. Thus, Besnard teaches a known technique in the art to accomplish the desired goal of the Peters patent.

Also on page 8 of the Brief, Appellant argues that there is no teaching or suggestion to combine the references. However in *KSR*, the Supreme Court held that a rigid application of such a mandatory formula as teaching, suggestion, or motivation was incompatible with its precedent concerning obviousness. *See KSR* at 1741.



With respect to the limitation in claim 8, column 4 of Besnard is difficult to interpret. However it appears that lines 26-34 discuss the gain in mass of the lower portion of the club head by the provision of the elongated recesses 3 in the top peripheral edge. That is, while the mass of the club head remains constant, on the order of 230g to 300g, the lower part of the club head can be increased from 3g to 15g due to the material removed with respect to the recess on the top edge. According to the Besnard this moves the center of gravity in the vertical direction from 0mm to 2mm up and down. Assuming the club head is of a material of constant density, if 3g of material are removed from the recess and placed on the lower portion of the club head of a club weighing 300g, the volume of the recess would equal approximately 1% of the volume of the head. This lies within the range claimed in claim 8.

Turning to claim 12, the claim requires not only that the volume of said at least one recess decreases as the set is varied from one club to another as required by claim 1, but also that the number of recesses decrease at the same time. In our view Besnard is suggestive of three ways to move the center of gravity upwardly in the club head by increasing mass in the upper wall. One, the number of recesses might be reduced with each recess being of the same volume. Two, the volume of each recess might be reduced keeping the number of recesses constant. And three, both the number and volume of the recesses might be reduced to vary the volume of material in the upper wall. Thus, it can be seen that there is a finite number of identified, predictable solutions with a reasonable expectation of success as to how the mass in the upper wall might be varied by one of ordinary skill. Accordingly, it can be seen that one of ordinary skill has good reason to

pursue the limitation of claim 12 as obvious to try under the rationale articulated by the Supreme Court in *KSR*. See *KSR* at 1742.

#### REJECTION UNDER 37 C.F.R. § 41.50(b)

All words in a claim must be considered in judging the patentability of that claim against the prior art. If no reasonable, definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious – the claim becomes indefinite. See *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970). Our analysis of the claims indicates that considerable speculation as to meaning of terms employed in claim 11 needs to be made. Rejections under 35 U.S.C. § 103 should not be based on speculations and assumptions. *In re Steele*, 305 F.2d 859, 862 (CCPA 1962); *Ex parte Head*, 214 USPQ 550, 551 (Bd. App. 1981). Accordingly, we reverse the 35 U.S.C. § 103 rejection of claim 11 and enter the rejection noted herein below. It must be noted, however, that this is a technical reversal based on the indefiniteness of the subject matter and is not to be construed as a reversal based on the prior art cited by the Examiner.

Claim 11 is rejected under 35 U.S.C. § 112, second paragraph, as indefinite. It is unclear whether the claim expression “volume of all recesses decreases” means the volume of each and every recess on the long irons is smaller than the recess on the short irons or all the recesses taken collectively result in a decreasing volume from the long irons to the short irons.

### CONCLUSION AND ORDER

The rejections of claims 1, 7, 8, 12, 15, and 16 are affirmed. The rejection of claims 11 is reversed. A new rejection pursuant to our authority under 37 C.F.R. § 41.50(b) has been entered against claim 11.

Regarding the affirmed rejection(s), 37 C.F.R. § 41.52(a)(1) provides "Appellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejection(s) of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellant, *WITHIN TWO MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection,

the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART - 37 C.F.R. § 41.50(b)

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